OK TO ENTER: /C.R./ (01/05/2010)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Serial No. 10/039,481
Confirmation No..... 1737
Filing Date ..... January 8, 2002
Inventor ..... Yaacov Almog
Group Art Unit..... 1795
Examiner ..... Rodee, Christopher D
Patent Docket No..... 600204464-9
Title:..... Toner Particles With Modified Chargeability

REPLY BRIEF OF APPELLANT

To: Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

From: James E. Lake (Tel. 509-624-4276; Fax 509-838-3424)
Wells St. John P.S.
601 W. First Avenue, Suite 1300
Spokane, WA 99201-3828

Appellant herein replies to the October 14, 2009 Examiner's Answer. Appellant maintains all of the assertions made in the previous Brief of Appellant, but provides the following general remarks regarding the overall impropriety of the claim rejection and the correct test for evaluating 35 U.S.C. § 112 compliance.

REMARKS

The test for sufficiency of support in an application is whether the disclosure relied upon reasonably conveys to the person of ordinary skill that the inventor had possession of the claimed subject matter at the time of filing. Ralston Purina Co. v. Far-Mar-Co, Inc., 1570 F.2d 1570, 1575 (Fed. Cir. 1985). "Precisely how close the original description must come to comply with the description requirement of 35 U.S.C. Sec. 112 must be determined on a case-by-case basis." Id. "[T]he primary consideration is factual and depends on the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure." In re Wertheim, 541 F.2d 257, 262 (CCPA 1976).

However, the Patent Act and case law precedents "require only sufficient description to show one of skill in the [relevant] art that the inventor possessed the claimed invention." Union Oil Co. v. Atlantic Richfield Co., 208 F.3d 989, 997 (Fed. Cir. 2000). The claimed invention need not be described word-for-word in the application to satisfy the description requirement. Ralston Purina, 1570 F.2d at 1577-8. Indeed, ranges found in the claims need not correspond exactly to those disclosed in the application. Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1566 (Fed. Cir. 1991) (citing Ralston Purina, 1570 F.2d at 1575). The "issue is whether one skilled in the art could derive the claimed ranges" from the disclosure. Id.

It would let form triumph over substance if the description requirement were allowed "to eviscerate claims that are narrowed during prosecution, simply because the patent applicant broadly disclosed [ranges] in the original

patent application but then narrowed his claims during prosecution." Union Oil at 1000 (citing In re Wertheim, 541 F.2d at 263). Similarly, "that a claim may be broader than the specific embodiment disclosed in a specification is in itself of no moment." In re Rasmussen, 650 F.2d 1212, 1215 (CCPA 1981) quoted in Ralston Purina, 1570 F.2d at 1575.

Appellant asserts that the Office has failed to properly determine the teachings reasonably conveyed by Appellant's application. In some respects, the Office has improperly eviscerated claims narrowed during prosecution merely because the claims are more narrow than the subject matter broadly disclosed in the application. In other respects, the Office has improperly limited its determined scope of the written description to specific examples disclosed in the application.

Among other features, claims 47 and 63 set forth that "the coating of the at least one ionomer increases the chargeability of the toner particles to greater than 7 pmho/cm." The Office Action alleges that the specification does not describe "an increase in conductivity of greater than 7 pmho/cm as currently claimed" and that "[t]he value of greater than 7 pmho/cm as the increase in charge is not described."

Page 2, lines 3-9 of the specification state the invention relates to preparing "liquid toners containing components for imparting chargeability to ordinarily unchargeable liquid toner particles" and "enhancing the chargeability of insufficiently chargeable liquid toner particles." Thus, the specification sets out the broad scope of subject matter addressed, that is,

both unchargeable and insufficiently (e.g., weakly) chargeable particles are encompassed.

Page 6, line 38 to page 7, line 8 of the specification states "weakly chargeable" particles include those to which "a weak charge could be imparted" but "it would be apparent that this property would be of little or no utility
so far as practical applications in electrostatic imaging were concerned." In such cases, "the ionomer is used in an amount effective to impart enhanced chargeability to the toner particles."

Page 2, lines 3-9 of the specification broadly describes imparting chargeability to ordinarily "unchargeable" liquid toner particles. Page 4, line 30 to page 5, line 4 describes a liquid toner for electrostatic imaging in which the "unchargeable" core material of toner particles is coated with an ionomer in an amount effective to impart enhanced chargeability to the ordinarily "unchargeable" particles. Page 5, lines 30-36 describes forming ordinarily "unchargeable" particles and using an ionomer in an amount effective to impart enhanced chargeability to the particles. Page 6, lines 32-37 describes a "particular" embodiment in which ordinarily "unchargeable" particles that "would be regarded as unchargeable by the skilled person" use an ionomer "in an amount effective to impart chargeability to the toner particles."

Consequently, the broad disclosure of the specification clearly encompasses <u>any</u> amount of chargeability enhancement of the claimed toner particles, whether unchargeable or weakly chargeable. For both unchargeable and weakly chargeable toner particles, at least page 5, lines 2-

4 and 21-25, page 6, lines 11-14, page 7, lines 28-30, and page 8, lines 19-27 of the specification describes a particle coating that produces the chargeability enhancement, as set forth in claims 47 and 63. That is, regardless of whether the toner particles are normally only chargeable to 0 (unchargeable), 3, 1, 2, or 7 pmho/cm, a coating is disclosed in the specification to enhance chargeability.

Tables 3-5 show the use of ionomer coatings enhancing the chargeability of weakly chargeable toner particles. Page 10, line 34 to page 11, line 2 of the specification states that from Figs. 1-3 "it may be seen that use of the ionomer increases ... particle conductivity." Specifically, Figs. 1 and 2 "show the effect of [AClyn] 290 and [AClyn] 291 respectively on conductivity and Fig. 3 shows the effect of both materials on conductivity." Table 5 similarly describes conductivity increases using AClyn 291A.

In each data set, increasing ionomer content from 0% to 10% to 20% produces increasing levels of particle conductivity, though some variability in the amount of the stepped increase is observed depending on the specific ionomer, particle material, and/or mixing temperature. For example, Figs. 1 and 2 use Elvax 5650T particles that include FG 7351 cyan pigment and are mixed with AClyn 290 or AClyn 291A ionomer at room temperature or 40°C and charged with Lubrizol 890 to produce four data sets. Table 5 uses DM55 toner particles mixed with AClyn 291A at 40°C and charged with Lubrizol 890 to produce one more data set.

Additionally, Table 3 uses Dynapol S-1228 particles that include blue pigment BT 583D and are mixed with AClyn 291A at 40°C and charged with

Lubrizol 890 to produce an additional data set. The data shows that increasing ionomer content from 0% to 5% to 10% to 20% produces increasing levels of particle conductivity.

Further, Table 4 uses the Table 3 particles mixed with AClyn 293A at 40°C and charged with BBP or CAP to produce two further data sets. The data shows that increasing ionomer content from 0% to 5% produces increased particle conductivity. Per page 13, lines 27-29, the 5% ionomer particles were charged sufficiently to 24 or 17 pmho/cm to produce very good copy quality, while the 0% ionomer particles were not charged sufficiently to 1 or 2 pmho/com.

Without question, the specification broadly discloses a liquid toner including "weakly chargeable" toner particles having an ionomer coating that increases the chargeability of the toner particles, as in claims 47 and 63. The specification further provides "non-limiting Examples" (p. 10, ll. 1-2) for numeric increases in the chargeability of toner particles normally only chargeable to 3, 1, 2, or 7 pmho/cm. Since the specification broadly discloses any increase, it follows that Appellant may properly narrow the range to encompass the subset including an increase to greater than 7 pmho/cm, consistent with the examples.

The specification does not include examples that provide data regarding numeric increases in conductivity for unchargeable particles. However, the specification clearly ascribes the same broad disclosure for unchargeable particles that it does for weakly chargeable particles. That is, the specification supports a liquid toner including "unchargeable" toner

particles having an ionomer coating that increases the chargeability of the toner particles, as in claims 47 and 63.

Since the specification broadly discloses any increase, including an increase from 0 pmho/cm to some greater level, it follows that Appellant may properly narrow the range to encompass a subset. Also, since unchargeable particles are disclosed as having the same ionomer coating as weakly chargeable particles (see, e.g., p. 8, l. 19 to p. 9, l. 40), it follows that the increase for unchargeable particles may be to greater than 7 pmho/cm. The magnitude of the chargeability increases in the examples from 3, 1, 2, or 7 pmho/cm to 115, 162, 164, 24, 17, 86, or 103 pmho/cm is more than adequate to support increasing 0 pmho/cm particles to greater than 7 pmho/com.

Appellant asserts that those of ordinary skill, viewing the whole teaching of the specification, as is required, would find it shows the inventor had possession of increasing the chargeability of weakly chargeable, as well as unchargeable, toner particles to greater than 7 pmho/cm. The specification possesses a "sufficient description" of the claimed range, as well as its applicability to both weakly chargeable and unchargeable particles. The Office's contrary finding improperly requires the claimed range to be described word-for-word in the specification and to correspond exactly to the broader ranges disclosed. Those of skill could easily derive the claimed ranges from the specification. It would seem the Office rejects claims 47 and 63 simply because the patent applicant broadly disclosed the claimed ranges in the specification, but then narrowed the claims during prosecution. Such a rejection is improper under the facts of the present application.

It is theoretically conceivable that an upper boundary for particle conductivity might exist where a greater amount of ionomer fails to produce any increase in chargeability. Nevertheless, no proper justification exists for limiting Appellant's claimed range to an upper boundary. Tables 3-5 and Figs. 1-3 all show a positive slope relationship. Such relationship yields a reasonable expectation among those of ordinary skill that more than 20% ionomer in Tables 3 or 5 or Figs. 1-3 and more than 5% ionomer in Table 4 may further increase chargeability. Table 3 records the highest chargeability increase to 164 pmho/cm. Even so, page 12, lines 24-34 of the specification theorizes, referring to Table 3, that still further increases are possible with an optimal thinner, more even coating.

Without question, the Office's requirement to limit the claimed range with an upper boundary of one of the numeric values in the examples or some other value would result in excluding subject matter from the claims that is properly described in the specification. Appellant asserts that those of ordinary skill, viewing the whole teaching of the specification, as is required, would find it shows the inventor had possession of increasing the chargeability of weakly chargeable, as well as unchargeable, toner particles to levels greater than demonstrated in the examples. The specification possesses a "sufficient description" of an unbounded upper limit, as well as its applicability to both weakly chargeable and unchargeable particles. The Office's contrary finding improperly refuses to permit a claim broader than a specific embodiment disclosed in the specification.

Speaking generally, the Office's grounds for rejection seem to describe accurately the content of the specification. However, the Office's technical parsing of the specification focuses laser-like on the form of the specification without regard to the substance. Appellant asserts that the grounds for rejection fail to properly regard the teaching of the whole. Analogously, though many pine needles of an individual branch of a certain tree are addressed in the grounds for rejection, the Office fails to perceive the forest that represents the teachings of the specification taken as a whole.

As a result, Appellant respectfully requests withdrawal of the rejection and allowance of all pending claims.

Respectfully submitted,

Dated: December 10, 2009 By: /James E. Lake/
James E. Lake
Reg. No. 44,854